

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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OFFICE OF THE SECRETARY

In the Matter of

Federal-State Joint Board on
Universal Service

Forward-Looking Mechanism
for High Cost Support for
Non-Rural LECs

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CC Docket No. 96-45

CC Docket No. 97-160

**COMMENTS OF TDS TELECOMMUNICATIONS
CORPORATION, INC.**

Margot Smiley Humphrey
Koteen & Naftalin, L.L.P.
1150 Connecticut Avenue, NW
Suite 1000
Washington, DC 20036

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COMMENTS OF TDS TELECOMMUNICATIONS CORPORATION, INC.

TDS Telecommunications Corporation, Inc. (TDS Telecom or TDS), by its attorneys and on behalf of its 105 incumbent local exchange carrier (ILEC) operating companies in 28 states, submits these comments in response to the July 18, 1997 Further Notice of Proposed Rulemaking in the above-captioned proceedings.¹

The TDS Telecom ILECs provide service primarily to rural areas, where costs of service

¹ Federal-State Joint Board on Universal Service and Forward-Looking Mechanism for High Cost Support for Non-Rural LECs, CC Dockets No. 96-45 and 97-160, FCC 97-256 (released July, 18, 1997) (FNPRM).

typically exceed the costs in more densely populated areas. All 105 TDS Telecom ILECs are “rural telephone companies” under the statutory definition in section 3(47) of the Communications Act, as amended, 47 U.S.C. §153(47). Given the characteristics of their study areas, the TDS Telecom ILECs have good reason to have concerns about the Commission’s assumptions, fact-gathering, evaluation and conclusions about measuring the higher costs of rural service on a geographically deaveraged basis in this proceeding. This phase of the Commission’s efforts to apply forward-looking “economic” proxy model costs (FLEC) to ILECs will apply first to larger LECs. Not long thereafter, the Commission has decided to mandate a FLEC methodology for rural ILECs, including the TDS companies.

The Decisions in this Proceeding Will Inevitably Affect Rural ILECs

TDS Telecom is aware that the Commission has undertaken to consider FLEC for rural ILECs separately, with the participation of a rural task force. The purpose is to ensure adequate attention to and accommodation of the unique challenges rural ILECs face in providing evolving area-wide networks and services in rural study areas. Indeed, TDS Telecom supports and greatly appreciates the Commission’s decision both to adopt, with some adjustments, the LEC industry’s interim universal service plan for rural ILECs and to continue exploring rural issues beyond the time set for implementing FLEC for non-rural LECs. However, what the Commission and the Joint Board decide here is likely to serve as a precedent, framework, template or even an exact blueprint for completing a rural LEC FLEC plan. The Commission has not tried to conceal that this is the approach it has in mind. It reiterates (para. 9) its unwavering intention that “rural LECs should make the transition later.” It even discloses in this FNPRM (para. 157) that it has already “tentatively concluded that users should be able to use different expense estimates for

small, medium and large companies,” demonstrating its presumption that the rural LEC plan will be a somewhat customized version of what it develops here. Since the Commission apparently does not plan to start the rural FLEC proceeding with a “clean slate,” it cannot simply ignore whether its plan can be translated to reflect rural LECs’ different and varied situations.

Using Proprietary Information and Assumptions Derived from Larger LECs’ Cost Experience Presents a Grave Danger that the Basic Model Will Reflect Hidden Anti-Rural or Anti-Small Company Biases

TDS Telecom is also concerned that the Commission’s plan for expedited adoption of a non-rural LEC FLEC model will leave unrectified the many deficiencies the Commission, the Joint Board and the parties have identified in the proposals still under consideration. There has not yet been a model that adequately predicts costs even for larger LECs, let alone for the far more diverse costs and investment profiles of rural LECs. It is difficult for rural LECs even to evaluate and critique proposals: the computer and personnel resources required exceed those generally available to rural LECs; the proposed models are constantly in flux, and the most recently proposed models are not even fully written.

TDS Telecom endorses the Commission’s determination not to accept proposals without adequate information disclosure and back up. To work, a model will necessarily be enormously complex. However, insofar as rural LEC interests are concerned, it is not a sufficiently public and accountable process for the Commission and Joint Board staffs to analyze proprietary information, run computer models few can replicate and draw conclusions about network design, inputs and impacts that will inescapably shape their rural LEC methodology. If assumptions are

to be employed about how LECs should design and configure their networks — as, for example, whether and when to assume an additional switch or a host-remote arrangement (para. 122) — it may be very misleading to decide that switching costs should be limited to a particular switching approach. Network configuration decisions that are feasible for a larger LEC or competitor with other facilities in denser areas to use as host switches may well not be available network configuration alternatives for a rural LEC with a smaller stand-alone study area. Indeed, building assumptions about how the most “efficient” network must look into the cost model would almost certainly bias the model against smaller telephone companies and smaller competitive entrants, and may, in fact, predetermine a network design inappropriate for small companies serving rural areas.

Similarly, assumptions about network use and capacity for a rural area will be sensitive to individual marketplace facts. For example, in a sparsely populated area, the model must incorporate the effect of competitive entry on network design and cost. Where low traffic volume results from sparser population and fewer concentrated customer clusters, even a single competitor can profoundly affect the fill factor for facilities, the cost per line and the accuracy of a model’s assumptions about the different configurations and availability of growth capacity.

The potential for unintended and difficult-to-model impacts like these in a model developed for larger LECs and only “tweaked” for rural LECs is a factor the Commission should be actively avoiding now, in this proceeding.

The FNPRM's Switching and Transmission Equipment Discussion Raises Questions about Rural LEC Network Design and Costs

With the general concerns discussed above in mind, TDS Telecom offers the following observations -- drawn from its network engineering experience in providing rural universal service -- about the issues and assumptions raised for this first round of comments:

1. TDS Telecom agrees with the suggestion raised in paragraph 121 that a proxy model should take into account differences in the costs of host and remote switches. The cost difference is significant and extends to hardware, software and maintenance over the life of the facilities. It would be misleading to model costs without recognizing that a LEC will take advantage of the opportunity to design a host-remote configuration to minimize costs when feasible. The model will have to reflect rural market conditions and local ownership patterns to provide a realistic view of the best configuration that is feasible.

2. The Commission's tentative conclusion (para. 122) that it should develop an algorithm that assigns hosts and remotes to specific wire centers illustrates the danger of incorporating the design strategies of a particular time as presumptively the most efficient technology. It is true that switching design has evolved from installing more hosts in the mid-80's to today's emphasis on consolidating networks to reduce overall costs by using host-remote technology. However, it would be a mistake to conclude that host-remote technology is or will always be the technology of choice. TDS Telecom has recently been achieving further economies in many locations by using the technology of digital loop carrier equipment (DLC) at digital serving area (DSA) sites. This technology can enable a LEC to reduce the hardware it must deploy at either a host or remote office. It will be difficult to develop an algorithm that can reflect the ongoing evolution of switch

design or when a particular facility will reach its capacity. The more accurate the model's sensitivity to technological change, however, the less chance an investor will have that high cost support will be "sufficient" over the life of an investment. The efficient choice when a particular installation is made and the costs incurred then may not be the most cost effective way to proceed in the future. However, the investment in the facilities actually deployed does not go away when a new approach that becomes available widens the choice of switching design strategies. In the real world, no investor scraps and redesigns its network every time technology evolves; it would be a waste of society's resources if such a "slash and burn" strategy were the case.

3. TDS Telecom agrees with the suggestion in paragraph 123 that all equipment has a capacity that should be reflected in a cost model. It will become increasingly difficult to predict when replacement or expansion will be necessary or efficient as competition makes it harder to generalize and embody in a competitively neutral model the level of demand and use a facility can expect in a particular market setting.

4. TDS Telecom questions the underlying assumption (para. 124) that an additional switch would be added to a wire center when the switch there reached capacity. In practice, a LEC wire center would be designed with the capacity to handle the forecast traffic. Rather than collocating expansion switches in an existing wire center, additional switch sites may be deployed in large markets to avoid the increased risk to public safety and higher outside plant cost inherent in over-centralization.

5. It has been the experience of TDS Telecom, regarding the issues raised by paragraph 125, that switch costs fluctuate depending on what suppliers are bidding and the state of the equipment market at the time of a purchase. Costs also typically vary over the installation,

upgrading and replacement of the switches.

6. The per-line cost of switching depends on switch size, location, product knowledge, timing, buying power and other factors that would be hard to quantify. Switches that serve more lines generally cost less per line than "smaller" switches (paras. 126-127) or service to a smaller share of a limited customer base. As discussed above, new switch design alternatives can also reduce the switching cost per line, but may shift costs into, for example, the loop plant.

Conclusion

The Commission and the Joint Board have undertaken an enormous and highly complicated task. The decision to extend a proxy cost model to rural LECs and the unavoidable carryover to that task of the decisions and assumptions that emerge in this proceeding, accordingly preclude the Commission from ignoring rural LEC needs and impacts in this proceeding. TDS Telecom urges the Commission to keep in mind the different conditions in rural LEC

markets as it seeks here to model a set of generic cost characteristics for non-rural LECs' high cost areas that can fairly predict costs for incumbent and new LECs to target sufficient universal service support to state-designated providers.

Respectfully Submitted,

TDS TELECOMMUNICATIONS
CORPORATION, INC.

By: /s/Margot Smiley Humphrey
 Margot Smiley Humphrey

Koteen & Naftalin, L.L.P
1150 Connecticut Avenue, N.W.
Suite 1000
Washington, DC 20036

Its Attorneys

August 8, 1997

CERTIFICATE OF SERVICE

I, Sheila V. Hickman, a secretary in the offices of Koteen & Naftalin, L.L.P., hereby certify that true copies of the foregoing Comments of TDS Telecommunications Corporation, Inc. have been served on the parties on the attached service list, via first class mail, postage prepaid, on the 8th day of August, 1997.

/s/ Sheila V. Hickman
Sheila V. Hickman

SERVICE LIST

* The Honorable Reed E. Hundt, Chairman
Federal Communications Commission
1919 M Street, NW
Room 814
Washington, DC 20554

* The Honorable Rachelle B. Chong,
Commissioner
Federal Communications Commission
1919 M Street, NW
Room 844
Washington, DC 20554

* The Honorable Susan Ness, Commissioner
Federal Communications Commission
1919 M Street, NW
Room 832
Washington, DC 20554

* The Honorable James H. Quello,
Commissioner
Federal Communications Commission
1919 M Street, NW
Room 802
Washington, DC 20554

The Honorable Julia Johnson, State Chair,
Chairman
Florida Public Service Commission
2540 Shumard Oak Blvd.
Gerald Gunter Building
Tallahassee, FL 32399-0850

The Honorable David Baker,
Commissioner
Georgia Public Service Commission
244 Washington Street, SW
Atlanta, GA 30334-5701

* James Casserly
Federal Communications Commission
Commissioner Ness's Office
1919 M Street, NW
Room 832
Washington, DC 20554

The Honorable Sharon L. Nelson,
Chairman
Washington Utilities and Transportation
Commission
1300 South Evergreen park Dr. SW
P.O. Box 47250
Olympia, WA 98504-7250

The Honorable Laska Schoenfelder,
Commissioner
South Dakota Public Utilities Commission
State Capitol, 500 East Capitol Street
Pierre, SD 57501-5070

Martha S. Hogerty
Missouri Office of Public Council
301 West High Street, Suite 250
P.O. Box 7800
Jefferson City, MO 65102

* Tom Boasberg
Federal Communications Commission
Office of the Chairman
1919 M Street, NW
Room 814
Washington, DC 20554

Charles Bolle
South Dakota Public Utilities Commission
State Capitol, 500 East Capitol Street
Pierre, SD 57501-5070

Deonne Bruning
Nebraska Public Service Commission
300 The Atrium, 1200 N Street,
P.O. Box 94927
Lincoln, NE 68509-4927

Debra M. Kriete
Pennsylvania Public Utilities Commission
North Office Building, Room 110
P. O. Box 3265
Commonwealth and North Avenues
Harrisburg, PA 17105-3265

Rowland Curry
Texas Public Utility Commission
1701 North Congress Avenue
P.O. Box 13326
Austin, TX 78701

Sandra Makeeff
Iowa Utilities Board
Lucas State Office Building
Des Moines, IA 50319

Bridget Duff, State Staff Chair
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0866

Philip F. McClelland
Pennsylvania Office of Consumer Advocate
1425 Strawberry Square
Harrisburg, PA 17120

* Kathleen Franco
Federal Communications Commission
Commissioner Chong's Office
1919 M Street, NW
Room 844
Washington, DC 20554

Thor Nelson
Colorado Office of Consumer Counsel
1580 Logan Street, Suite 610
Denver, CO 80203

* Paul Gallant
Commissioner Quello's Office
Federal Communications Commission
1919 M Street, NW
Room 802
Washington, DC 20554

Barry Payne
Indiana Office of the Consumer Counsel
100 North Senate Avenue, Room N501
Indianapolis, IN 46204-2208

* Emily Hoffnar, Federal Staff Chair
Federal Communications Commission
Accounting and Audits Division
Universal Service Branch
2100 M Street, NW
Room 8617
Washington, DC 20554

* Timothy Peterson, Deputy Division Chief
Federal Communications Commission
Accounting and Audits Division
2100 M Street, NW, Room 8613
Washington, DC 20554

Lori Kenyon
Alaska Public Utilities Commission
1016 West Sixth Avenue, Suite 400
Anchorage, AK 99501

James B. Ramsay
National Association of Regulatory Utility
Commissioners
1100 Pennsylvania Avenue, NW
P.O. Box 684
Washington, DC 20044-0684

Brian Roberts
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Kevin Schwenzfeir
NYS Dept. of Public Service
3 Empire State Plaza
Albany, NY 12223

Tiane Sommer
Georgia Public Service Commission
244 Washington Street, SW
Atlanta, GA 30334-5701

* Sheryl Todd
Federal Communications Commission
Accounting and Audits Division
Universal Service Branch
2100 M Street, NW
Room 8611
Washington, DC 20554

* International Transcription Service
2100 M Street, NW
Suite 140
Washington, DC 20037

* via Hand Delivery